

REMARKS

As a preliminary matter, Applicants agree with the Examiner that the IDS filed March 15, 2004 should not be reviewed and considered by the Examiner because the IDS is for a different patent application.

Claims 7-8 and 10 stand rejected under 35 U.S.C. 102(b) as being anticipated by Yamanaka et al. (U.S. Patent No. 6,452,653 B1). In response, Applicants amended independent claim 7 to recite a plurality of groups of stepwise structures that extend in parallel in a partial region of the first substrate when viewed in a direction perpendicular to the first substrate, and respectfully traverse the rejection as it applies to the amended claim.

The Examiner cites Yamanaka as disclosing a stepwise structure 13 in FIGs. 1 and 8. However, as shown in FIG. 2A, for example, groups 12 of columnar portions 13a have structures that are randomly distributed on a residual film 13b. That is, Yamanaka does not have each of a plurality of stepwise structures extending in parallel for each group when viewed in a direction perpendicular to the first substrate.

In contrast, FIG. 8A of the present application shows structures 85 that are formed to extend in parallel in a partial region of the substrate for each group when viewed in a direction perpendicular to the first substrate in a partial region of the first substrate. Since Yamanaka fails to disclose this feature, withdrawal of the §102 rejection of claims 7-8 and 10 is respectfully requested.

Claim 9 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka, and further in view of Sugiura et al. (U.S. Patent No. 6,882,388 B2). Since dependent claim 9 refers back to claim 7, Applicants traverse the rejection for the reasons recited above with respect to the §102 rejection of independent claim 7. Further, for the reasons set forth below, Applicants

respectfully submit that Yamanaka and Sugiura do not suggest all of the features of independent claim 1, which is the base claim of dependent claim 9.

Yamanaka discloses that each of the groups 12 of columnar portions is composed of a plurality of minute columnar portions (projecting portions) 13a that form a basic unit for determining the reflective properties of a reflector 10. (See col. 18, lns. 40-43). Yamanaka further discloses that, as shown in the drawing, the groups 12 of columnar portions are positioned irregularly on a substrate 11 in parallel relation to each other. This results in a structure in which the groups 12 of columnar portions as the basic units are not observed repetitively in a given period. The structure suppresses interference of light, which occurs due to a repetitive pattern in which the projecting and depressed structures are arranged regularly, and suppresses a phenomena of colored reflected light. (See col. 18, lns. 43-52).

Yamanaka teaches away from any type of parallel formation of the structures in each group by stating that the columnar portions are not observed repetitively within a given period, and also by showing such columnar portions in the drawings in a non-parallel arrangement. Yamanaka also teaches away from forming columnar portions in parallel by stating that a parallel formation of the structures would not suppress interference of light.

In contrast, the present invention, as discussed above, has separate groups of structures 85 that are formed in parallel in a partial region of the substrate (See FIG. 8A). As described in Applicants' specification pg. 24, lns. 4-10, such a formation of structures within each group is advantageous. More specifically, light that is directed toward a direction of a user's eye from the room/ambient light by reflection from a reflective electrode can be increased. Accordingly, light irradiated from the upper side of such a structure can be utilized more effectively.

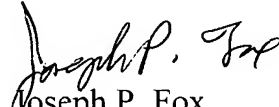
Yamanaka and Sugiura, however, suffer from the same defects as discussed in Applicants' specification on pg. 23, Ins. 6-13. More specifically, in conventional liquid crystal display devices in which roughness is provided in groups randomly on the surface of the reflective electrode, as shown in FIG. 7 of the present application, an amount of room/ambient light that reflects toward a user's eye is small relative to the amount of light that is reflected by the reflective electrode. Accordingly, since Yamanaka and Sugiura cannot achieve the above described advantage of the present invention, either alone or in combination, withdrawal of the §103 rejection of claim 9 is respectfully requested.

Claims 11-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka. Applicants traverse the rejection for the reasons recited above with respect to the §103 rejection of claim 9.

As discussed above, Yamanaka fails to teach or suggest plurality of groups of stepwise structures, wherein each of the structures within a group extend in parallel in a partial region of the first substrate when viewed in a direction perpendicular to the first substrate. Moreover, Yamanaka cannot achieve the advantage of an improved amount of room/ambient light being reflected to a user's eye from the light reflected by a reflective electrode. Accordingly, withdrawal of the §103 rejection of claims 11-12 is respectfully requested.

For all of the foregoing reasons, Applicants submit that this Application is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,
GREER, BURNS & CRAIN, LTD.

By: 
Joseph P. Fox
Registration No. 41,760

November 8, 2005

300 South Wacker Drive, Suite 2500
Chicago, Illinois 60606
(312) 360-0080
Customer No. 24978